

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-8 (canceled)

Claim 9 (original): A ~~stably~~ transfected cell line comprising: i) a DNA expression vector comprising a first DNA sequence encoding a first protein having a detectable signal, one or more 3' UTR sequence and one or more expression control sequence operatively associated with said first DNA sequence, and a heterologous instability sequence DNA ~~inserted into said 3' UTR sequences~~, said instability sequence DNA comprising a second DNA sequence corresponding to one or more mRNA instability sequence derived from one or more naturally occurring genes; and ii) a control DNA expression vector comprising a control DNA sequence encoding a second protein having a detectable signal, and one or more 3' UTR sequence and one or more expression control sequence operatively associated with said control DNA sequence.

Claim 10 (withdrawn): A method of screening for one or more compound which affect mRNA stability comprising the steps of: i) providing a DNA expression vector, which in the absence of a test compound is capable of expressing a protein having a detectable signal, wherein the mRNA which is transcribed from said expression vector and encodes said protein comprises at least one copy of a heterologous mRNA instability sequence; (ii) contacting said DNA expression vector with at least one test compound under conditions whereby, in the absence of the test compound, said DNA expression system is capable of expressing said protein having a detectable signal; (iii) measuring said detectable signal from said first protein expressed from said DNA expression vector; (iii) measuring said detectable signal from said second protein expressed from said control DNA expression vector; and (iv) comparing the measured detectable signal from said first protein with a control

wherein a decrease in the measured detectable signal compared to said control indicates a compound that decreases mRNA stability and an increase in the measured detectable signal compared to said control indicates a compound that increases mRNA stability.

Claims 11-12 (canceled)

Claim 13 (withdrawn): The method according to claim 10, wherein said compounds are being screened for their ability to induce mRNA degradation, and wherein a decrease in the measured detectable signal compared to said control indicates a compound that induces mRNA degradation.

Claim 14 (withdrawn): A method for comparing the extent of mRNA degradation induced by two or more compounds comprising the steps of: (i) providing a DNA expression vector, which in the absence of a test compound is capable of expressing a protein having a detectable signal, wherein the mRNA which is transcribed from said expression vector and encodes said protein comprises at least one copy of a heterologous mRNA instability sequence; (ii) contacting said DNA expression vector separately with two or more test compounds under conditions whereby, in the absence of the test compounds, said DNA expression system is capable of expressing said protein having a detectable signal; (iii) measuring said detectable signal in the presence of each test compound; and (iv) comparing the measured detectable signals; wherein a lower measured detectable signal indicates a greater extent of mRNA degradation.

Claim 15 (currently amended): An assay system for screening for compounds which destabilise mRNA comprising: ~~(i) a DNA expression vector comprising a first DNA sequence encoding a first protein having a detectable signal, one or more 3' UTR sequence and one or more expression control sequence~~

~~operatively associated with said DNA sequence, and a heterologous instability sequence DNA inserted into said 3' UTR sequence, said instability sequence DNA comprising a second DNA sequence corresponding to one or more mRNA instability sequence derived from one or more naturally occurring genes; and (ii) a control DNA expression vector comprising a control DNA sequence encoding a control protein having a detectable signal, and one or more 3' UTR sequence and one or more expression control sequence operatively associated with said control DNA sequence~~
a transfected cell line according to claim 9 and a test compound.

Claims 16-22 (canceled)

Claim 23 (new): A transfected cell line according to claim 9, wherein said cell line is stably transfected.

Claim 24 (new): A transfected cell line according to claim 9, wherein said heterologous instability sequence DNA is inserted into said 3' UTR sequences.

Claim 25 (new): A transfected cell line according to claim 9, wherein said heterologous instability sequence DNA further comprises DNA corresponding to sequences that flank said mRNA instability sequence in the naturally occurring gene.

Claim 26 (new): A transfected cell line according to claim 9, wherein said heterologous instability sequence DNA is from about 10 to about 1500 nucleotides in length.

Claim 27 (new): A transfected cell line according to claim 25, wherein said heterologous instability sequence DNA comprises DNA corresponding to the whole, or a substantial part, or the 3' UTR from said naturally occurring genes.

Claim 28 (new): A transfected cell line according to claim 25, wherein said heterologous instability sequence DNA comprises DNA corresponding to one or more CRD from the coding region of said naturally occurring genes.

Claim 29 (new): A transfected cell line according to claim 9, wherein said one or more naturally occurring genes is selected from the group consisting of a gene encoding a cytokine, a gene encoding a chemokine, a gene encoding a nuclear transcription factor, a gene encoding an oxygenase, a proto-oncogene, an immediate early gene, a cell cycle controlling gene, and a gene involved in apoptosis.

Claim 30 (new): A set of transfected cell lines comprising: (i) a transfected cell line comprising a DNA expression vector comprising a first DNA sequence encoding a first protein having a detectable signal, one or more 3' UTR sequence and one or more expression control sequence operatively associated with said first DNA sequence, and a heterologous instability sequence DNA, said instability sequence DNA comprising a second DNA sequence corresponding to one or more mRNA instability sequence derived from one or more naturally occurring genes; and (ii) a transfected cell line comprising a control DNA expression vector comprising a control DNA sequence encoding a second protein having a detectable signal, and one or more 3' UTR sequence and one or more expression control sequence operatively associated with said control DNA sequence.

Claim 31 (new): A set of transfected cell lines according to claim 30, wherein said first and second proteins are the same protein.

Claim 32 (new): A set of transfected cell lines according to claim 30, wherein said heterologous instability sequence DNA in the transfected cell line of (i)

further comprises DNA corresponding to sequences that flank said mRNA instability sequence in the naturally occurring gene.

Claim 33 (new): A set of transfected cell lines according to claim 30, wherein said heterologous instability sequence DNA in the transfected cell line of (i) is from about 10 to about 1500 nucleotides in length.

Claim 34 (new): A set of transfected cell lines according to claim 32, wherein said heterologous instability sequence DNA in the transfected cell line of (i) comprises DNA corresponding to the whole, or a substantial part, of the 3' UTR from said naturally occurring genes.

Claim 35 (new): A set of transfected cell lines according to claim 32, wherein said heterologous instability sequence DNA in the transfected cell line of (i) comprises DNA corresponding to one or more CRD from the coding region of said naturally occurring genes.

Claim 36 (new): A set of transfected cell lines according to claim 30, wherein said one or more naturally occurring genes from which said second DNA sequence corresponding to one or more mRNA instability sequence in the transfected cell line of (i) is derived is selected from the group consisting of a gene encoding a cytokine, a gene encoding a chemokine, a gene encoding a nuclear transcription factor, a gene encoding an oxygenase, a proto-oncogene, an immediate early gene, a cell cycle controlling gene, and a gene involved in apoptosis.

Claim 37 (new): A set of transfected cell lines according to claim 30, wherein at least one of said cell lines is stably transfected.

Claim 38 (new): A set of transfected cell lines according to claim 30, wherein said heterologous instability sequence DNA in said transfected cell line comprising a DNA expression vector is inserted into said 3' UTR sequences.

Claim 39 (new): An assay system for screening for compounds which destabilize mRNA, comprising a set of transfected cell lines according to claim 30 and a test compound.